

Fairfax County Stormwater Management Ordinance

Small Group Work Session #2

October 17, 2012

MEETING NOTES

Adequate Outfall Requirements Break Out Team

- The state regulations are different from the current requirements used by Fairfax County.
- The adequate outfall provisions of the regulations are less stringent than the County's current requirements because it is unlikely that anyone would perform an outfall analysis if they had the option of using the state's "detention" method.
- State requirements are geared toward providing on-site detention rather than performing downstream analysis to identify inadequacies. If new minimum standards are adopted, existing flooding problems would not be addressed.
- In the County's PFM, "pre" conditions are assumed to be a forest in good condition, while the state defines "pre" as the existing conditions of a site.
- By contrast, federal requirements outlined in Executive Order 13508 for the Chesapeake Bay watershed are more stringent than both state and Fairfax County requirements.
- The County may adopt the state requirements, the existing County requirements, or develop a hybrid approach.

Current Adequate Outfall Standards

The team discussed the current County requirements.

- Consider flexibility for innovative designs.
- The current County standards can be cost prohibitive to implement.
- The problems in the County's streams were created over time and will require incremental solutions.
- The goal of the requirements should be to do no further harm to the stream as well as to provide some modest improvement to the existing conditions.

The team discussed the differences between the new state minimum requirements and the existing County requirements as follows:

Detention Requirements

- The requirements are trying to address flooding and erosion with one solution, which may not be an appropriate approach.
- The detention requirements should take into consideration a project's location in the watershed.

Adequate Outfall

- Consider added flexibility to the “bed and banks” requirement recognizing other stable natural systems.
- *Manmade conveyance*: The state and County requirements are similar although the results of using the energy balance method may not be fully tested.
- *Natural conveyance*: Consider a compromise to design to the 1.5 year storm for erosion protection. For flooding protection, the 10-year storm is increasing and it may be more appropriate to set a rainfall value at which there is a requirement for flood protection.
- *Restored conveyance*: The requirements for restored conveyance should be the same as for natural systems.

Detention Method

- Consider a hybrid methodology of the state detention method using good forest cover as the pre-development condition.
- Remove the County’s 1-year extended detention requirement.
- Consider providing incentives for development that go above and beyond the minimum requirements.

Stormwater Facilities in Residential Areas

- The technical criteria of the new regulations favor a larger number of small LID-type stormwater facilities utilized for land development projects. Current County policy is to require BMPs to be on out-lots except for infill or subdivisions with three or fewer lots.
- Requiring small BMPs to be placed on out-lots could present significant site design challenges and have an impact on lot yield.
- The state regulations recognize the challenge of maintaining dispersed on-lot BMPs by providing localities with the option of developing alternative maintenance assurance mechanisms.

Team #1

Advantages of Out-Lots

The team identified the following *advantages* to requiring that facilities continue to be placed on out-lots:

- There will be fewer BMPs installed throughout the County.
- Fewer facilities create less of a demand for inspections and maintenance enforcement.
- Placing facilities on dedicated lots prevents individual homeowners from altering or removing facilities.

Maintenance and Inspection Considerations

- LIDs, such as rain barrels, porous pavement, and rain gardens have advantages but will require proper maintenance. This may be a challenge if left to individual homeowners.
- One suggestion was that allowing BMPs on individual lots require a third party be hired and have a maintenance agreement.
- How will the County track that activity? Consider spot checks to verify proper maintenance.
- Education on homeowners' responsibility may be a challenge. The issues are similar to those around current swimming pool requirements. Pool companies do not know the rules and the County can't enforce them. The program lacks adequate education.
- Many reputable organizations can do third party certification for inspection/maintenance of LID BMPs
- What is the cost to homeowners? It will need to be reasonable – perhaps can be managed/paid for through HOA fees.
- Maintenance by professionals is essential. How will they qualify?
- Recommend maintenance agreements require annual notification that facilities are being maintained.
- Underground facilities are more difficult to maintain and may represent too much of a risk liability for an individual lot.
- Following up with maintenance and meeting qualifying characteristics to maintain BMPs is very complex.
- How much maintenance is needed for different BMP types? Pavers need a lot; rain gardens need maintenance of plants and soil. Use matrix to set criteria.
- A BMP database could be used to send reminders every two years (or more/less frequently as needed).
- Facilities can be expensive, especially considering long term maintenance costs.
- The County currently inspects facilities every five years – would need to add spot checking as a way of auditing compliance.
- A checklist for facility inspections should be created to go beyond “how it looks.” Homeowners should have the same checklist as the County uses for their own inspections.
- Enforcement must be established to ensure facilities continue to function. The group felt that rain gardens had been largely ignored – no one is checking that they are performing as designed.
- Inspection should be performed by someone who is certified with inspection information entered into a database.
- Look at the Center for Watershed Protection's guidelines for examples of maintenance agreement transfer language and to provide materials for ensuring understanding of the functions of the BMPs for homeowners.

Tracking

- Tracking of individual lot facilities is a concern. The County would have to dedicate staff to this activity.
- The state has a GIS database with thousands; can we use that as a checklist to keep track of what is acceptable?
- Adjacent property owners should be able to see the database so they know what BMPs are supposed to be present.

Out-Lot Considerations

The team considered whether moving away from out-lots was beneficial.

- Developers like the added flexibility.
- Would the addition of BMPs on individual lots be manageable for the County?
- There may be situations where this should not be an option. Should criteria be considered on a case-by-case basis?
- May be more of a consideration in redevelopment of older neighborhoods where there is no room for out-lots.

Criteria

The team considered how to set criteria for individual lot BMPs.

- An option, not a requirement. Allows flexibility.
- Assess which areas require more stormwater management (perhaps by watershed).
- Overlay the comprehensive plan with stormwater management practices by area.
- When deciding if allowed, consider nutrient trading.
- There needs to be clear lines of responsibility and perhaps incentives to ensure long-term maintenance.
- Consider appropriate runoff/outfall requirements.
- Consider criteria for a small subdivision lot vs. a 17,000 sq. ft home.

Other Considerations

- Will BMPs on individual residential lots be allowed for existing and redevelopment or only new development? New development should be the focus.
- New development – the County needs to be moving toward environmental site design (ESD); It is important to understand such issues as existing soil and vegetation or need to amend soil to improve drainage. Education is needed to ensure the homeowner does not make changes to any on-site BMPs.
- Small BMPs are better for some situations. But how do we verify that rain gardens are functioning? What plants and soil conditions are appropriate? Need manuals or other education materials.
- Consider providing “credit” for BMPs – not a one size fits all. Perhaps a tax credit.
- When properties get a waiver from standard development requirements; surrounding property owners need to be notified so they can weigh in.

- Look at how the Government Center gardens are working. Are they maintained more often than may be required due to their location?
- Consider being open to allowing facilities on more lots and increasing the types of facilities that can be used.
- If a property is sold, how are new owners educated about facilities on their property?
- Rain barrels can be very effective – but need to be maintained by the property owner similar to septic systems.
- For environmental site design the approach is to preserve and minimize. Landscaping can be functional as well as aesthetic.
- Consider an incentive based program to provide rebates or tax breaks for LID stormwater management. Would still need to consider maintenance agreements and proper education.
- Identify which watersheds have the greatest need for improvements and their proportion of the County.
- The DCR Clearinghouse has information on designing, installation, maintenance, long term testing, and effects – use to inform County decisions.
- Must stress the importance of education for these types of BMPs.
- Create a manual of guidelines to distribute to new homeowners. Consider making it part of closing documents.
- Consider the HOA leadership for new development. The HOA needs adequate legal standing, but may have the overall responsibility for inspection and maintenance.
- Consider enforcement – the County will need to be serious and set examples.
- Keep deed restrictions and/or require easements for all BMPs.
- The County needs to sets standards, but maintain flexibility in allowing BMPs on individual lots – not appropriate for all situations.

General Consensus

The team agreed that BMPs on site should be available as an option under certain circumstances. The homeowner will need to understand the requirements and there needs to be a system in place to educate new owners when a property is sold. Enforcement will need to be well thought through, with mechanisms in place to minimize the need for enforcement action (education, potential third-party agreements, HOA involvement, etc.).

Team #2

General Discussion

- The question is: if we don't allow the facilities on residential lots, can we meet the new requirements?
 - We must treat the volume on site.
 - A lot of BMPs are so small, they can't handle flow from multiple lots – can't avoid putting on residential sites.

- However, based on past experience, without buy-in, homeowner will not maintain these facilities, even with a maintenance agreement.
- HOAs should be part of maintenance process and part of the enforcement process.
- Covenant must be in place, with full disclosure at sale.
- If there is no HOA, the County should consider recommending one be created.
- Maintenance agreements should be clearer, more prescriptive, particularly for LIDs; boiler plate language for types of BMPs.
- Education is key.
- The County should provide information on which BMPs require the least maintenance, which have the highest cost of maintenance, and identify safety issues.
- Consider liability issues; legal entity responsible; taxation issues/financial equity.

Tax Equity

- Homeowners are getting taxed on the entire property, even if a BMP is on-site.
- Tax relief should be considered, though they are creating the impact. Previous development has also contributed, but old lots don't have same constraints.
- Should every lot in a subdivision have one for fairness?
- Should hydrology dictate?
- Can the County provide incentives? Make the BMPs more attractive so they are seen as a "feature?"

Liability

- Homeowner has an obligation/responsibility for operation.
- Who would be responsible if HOA or homeowner is not maintaining the BMP(s)? Who would the downstream homeowner go to for recourse?
- The County should have liability – there are many HOAs that are not functional.

Role of HOAs

- Should the maintenance agreement be with individual homeowners or with the HOA?
- Do we have enough County staff to enforce thousands of maintenance agreements with homeowners vs. hundreds with HOAs?
- HOAs – generally, if they are functional and when they know what their responsibilities are – they generally do what is required.
- Funds to maintain should be part of HOA fees.
- There is a lot of turnover in HOAs and in management companies.
- Management companies also need to be educated – they do not necessarily understand the maintenance requirements.

Third Entity

- Could the County create a third entity that homeowners and/or HOAs could contribute to fund for maintenance?

- Can the County create some kind of economies of scale?
- Potentially use septic system process as a model where a third party is hired for maintenance.

Restrictions on Certain BMPs

- | |
|---|
| <ul style="list-style-type: none"> • The stormwater regulations and the Virginia BMP Clearinghouse list the BMPs that may be used to meet water quality requirements. • Several BMPs are different than those in the current County Public Facilities Manual (PFM) or there is no equivalent. • The County may limit the use of certain BMPs with written justification to the Virginia Department of Conservation and Recreation (DCR). |
|---|

Discussion and Considerations

- What does the BMP Clearinghouse assess? Mostly just pollutant removal efficiency rather than the structural capacity of the device. The structural aspect of the facility should be the focus of any restrictions by the County.
- Some BMPs are not necessarily appropriate for residential areas – the zoning and land use process should address appropriateness of certain BMPs early.
- The location of BMPs next to surrounding established neighborhoods needs to be considered. Additional screening might be an option.
- Consider more flexibility for underground residential BMPs.
- Concern about not having the right tools to meet the new regulations since so many proprietary BMPs are still going through the Virginia Technology Assessment Protocol (TAP) – plus, it has very high standards and may be expensive for small proprietors.
- It was noted that the County has no authority to adopt BMPs that are not approved through the TAP process.
- Recommend an evaluation process for BMPs before July 2014 including structural, design, and engineering concerns. Note that the current PFM addresses some of this (such as for rain gardens).
- The County should consider allowing third parties, such as ASTM, to do structural testing, including for proprietary facilities.
- The team recommends not creating a duplicative committee to assess BMP efficiency; don't reinvent the Clearinghouse wheel.
- Consider how to enforce BMP maintenance.
- Need to address and/or predict the maintenance costs. Currently no financing plan is required for an HOA. Are homeowners adequately educated (such as about maintenance needs of permeable pavement)?
- Consider general restrictions for infiltration that are based on local geology.
- Consider lessons learned from alternative septic permitting.

- There are not as many concerns about the accuracy of the phosphorus-efficiencies; mostly about volume and verification.
- Consider permit approval to allow for a design variance that decreases nutrient removal efficiency.
- Consider conducting County demonstration projects more often and using that information to re-evaluate the PFM language.
- Consider an evaluation protocol pursuant to Clearinghouse approval. New Jersey and Washington Clearinghouses allow conditional use and general use. Trust in the rigor of the Virginia Clearinghouse protocol.
- Consider suburban/urban distinction for facility types.

Conclusions

- Keep the options open – don't automatically take any tools off the table.
- Don't second-guess Clearinghouse-approved pollutant reduction efficiencies unless there is an actual problem over time.
- In general, the County should focus limitations based on structural issues and appropriateness for specific sites.
- The zoning and planning process needs to be better integrated to catch issues with certain BMPs as soon as possible – i.e., tree loss potential, aesthetics, placement on the property and impacts to surrounding communities, etc. The County should identify certain BMPs that should not be used in residential areas, or only under certain conditions – with a focus on those that rely on infiltration.
- The County should assess the maintenance burden of certain BMPs and put in safeguards. For instance, for those BMPs with high burdens, require through the maintenance agreement that someone must do upfront financial planning and that maintenance is amortized.
- *Consensus item:* Regarding structural soundness and to guard against early failure, the team recommended that any proprietary facility approved by the Clearinghouse should also have to provide the County with third party certification for structural elements.

Group Discussion

The following points and comments were made during the group discussion after the individual teams reported the results of their discussions.

Restrictions on Certain BMPs

- Think through the process of planning, zoning, site design, and implementation and how that relates to specific BMPs. Consider how the community can be involved early in the review process through public comment or notification in order to identify issues early.
- The group generally concurred with the consensus item of having the County require third-party certification that a proprietary BMP is structurally sound and won't be subject to premature failure before allowing in the County.

Stormwater Facilities in Residential Areas

- BMP failure is an issue not only for pollution but also for flooding.
- BMPs need to be inspected by certified people.
- BMPs should be allowed on private lots but the responsibility and cost should be shifted to the County since they are being installed for the greater good.
- Use the process of alternative septic systems as a model.
- The County has limited resource capacity for the necessary inspections.
- Inspection needs should be based on BMP type.
- Look at lessons learned from Loudoun County with respect to taking over maintenance of BMPs from communities/HOAs.
- There is concern about the appropriateness of the County assuming responsibility for maintenance on private properties.
- There needs to be equity for properties with BMPs. Is it fair for an individual to maintain a BMP that was installed to control stormwater due to the development at-large? Requiring the HOA to assume responsibility may be one possible way to address this issue.
- Research should be done into existing programs such as Seattle.
- Enforcement could be done through HOA covenants as opposed to individual maintenance agreements. That way not maintaining the facility is a violation of the covenants and the HOA is in charge of inspections and enforcement.
- What about areas of the County that don't have HOAs?
- Consider requiring proof of inspection to be submitted with tax returns similar to car inspections.
- Provide training for home inspectors to identify facilities and assess condition. That way getting them maintained can be part of the property transfer process.
- Consider requiring bonds for certain BMP types.

Adequate Outfall Requirements

- It is very difficult to do downstream analysis with the proposed state requirements.
- The County should stick with the current requirements in the PFM.
- The County should maintain the requirement that pre-development conditions be considered forest in good condition.

- Consider developing real-life examples to show the impacts of the different requirements (state versus existing PFM) on a site. Right now, it is hard to visualize and make recommendations.
- Require field inspections in determining adequate outfall.
- Look at adequate outfall on a site-by-site basis considering other issues such as wetlands.

Other Issues

- What is the interplay between Fairfax County and other MS4s? What are their responsibilities to downstream properties in the County?
- How can we provide incentives for voluntary retrofits on private properties? Look at existing resources such as the Northern Virginia Soil and Water Conservation District.